Podium Pro Audio

Model PP1502A

15” 2-Way Self-Powered Speaker

User’s Manual

Podium Pro Audio

Audio at its highest level

http://www.podiumproaudio.com

© 2009

INTRODUCTION

Podium Pro Audio self-powered loudspeakers are a high performance yet economical source of portable live sound reinforcement. Applications include speech, vocals, stage monitor and music playback. Used in accordance with the information provided this product will give years of trouble free use.

PP1502A FEATURES

- Rugged, light weight ABS construction.
  - Built-in handle makes setup/teardown easy.
  - Rubber feet for added stability.
  - Feet drop into built-in stacking cups for secure stacking.
  - Perforated metal grill.
  - Built-in 1-½” (38mm) pole mount socket.
- 15” steel basket woofer.
  - High temperature woofer voice coil.
- Titanium diaphragm horn loaded tweeter.
- 900 Watt peak power amplifier.
  - Built-in MIC/LINE mixing capability.
  - Bass,Midrange and Treble controls.
  - Line level and dynamic microphone inputs.
  - Buffered and balanced loop through allows linking any number of speakers.

BEFORE YOU BEGIN

- Read these instructions.
- *Follow* these instructions.
- Heed all warnings.
- Do not use where the speaker may get wet.
- Avoid placing the speaker in direct sunlight.
- Never place this speaker in close proximity to a heat source such as a radiator, stove or heater vent.
- Never defeat the polarizing or safety ground on the AC cord.
- Be certain all equipment is OFF before making or breaking connections.
- Always lower the volume control to minimum (full counter-clockwise) before turning speaker ON or OFF.
- Never attempt to connect a power amplifier’s speaker level output to the PP1502A’s inputs.
- Clean only with a damp (not wet) cloth.
- Refer all service needs to qualified personnel. There are no user serviceable components inside.

TROUBLESHOOTING

Symptom	Likely Cause	What To Do
No sound.	AC power not connected or no AC power.	Verify the presence of AC power.
	Power switch off.	Turn speaker on.
	AC fuse blown.	Replace AC fuse (5A) If new fuse also blows speaker needs repair.
Speaker is ON but no sound.	No input signal.	Verify signal present at input connector(s).
	Input level set too low (full counter-clockwise).	Turn LINE LEVEL up (clockwise).
	Volume control set too low (full counter-clockwise).	Turn MASTER volume up (clockwise).
Microphone connected but no sound from microphone.	Microphone requires phantom power.	Change to a Dynamic Microphone or add a microphone preamp that provides phantom power.
	Defective microphone.	Repair or replace microphone.
	Defective microphone cable.	Repair or replace cable.
Sound is distorted even when volume is low.	The source level is too high, overloading the LINE IN.	Turn the LINE LEVEL down (counter-clockwise) and/or reduce source level. Raise the MASTER volume (clockwise) to restore desired loudness.
	AC line voltage too low.	Correct AC circuit fault.
	Source signal is distorted.	Correct source fault.
Excessive hiss in system.	Improper gain settings.	Lower MASTER volume. Then increase LINE LEVEL and/or MIC LEVEL to restore desired loudness.
Hum or buzz level rises and falls when volume level is raised or lowered.	Source has faulty safety ground.	Restore safety ground connection or repair source equipment.
	Faulty cabling between source and speaker.	Repair or replace cable.
Constant hum or buzz unaffected by volume setting.	Faulty safety ground connection.	Restore safety ground.
	Induced from AC cords.	Re-route AC power cables away from the audio interconnect cabling.
	“Ground loop” (circulating ground current).	Break (lift) the *audio* ground using an XLR/F to XLR/M adapter designed for this purpose. Connect between the source and speaker.
	Excessive length unbalanced cable from source.	Use balanced cables whenever possible. Use a Direct Injection Box (DI Box) to convert un-balanced sources to balanced.
	Improper gain structure.	*Increase* source and/or microphone output level and *decrease* speaker LINE IN and/or MIC INPUT level(s).

PP1502A SPECIFICATIONS

System Description: Self powered, ported 15” two-way
Frequency range (-10dB): 25Hz - 20kHz
Maximum acoustic output level: 125dB
System power rating: 350 Watts (program material)
900 Watts peak.
TREBLE control range: ±12dB @ 12kHz
MIDRANGE control range: ±12dB @ 3kHz
BASS control range: ±12dB @ 80Hz
Power requirements: 110VAC, 50/60Hz, up to 5A
Enclosure: ABS plastic
Weight: 53 lb. (24kg)

WARNING

PROLONGED EXPOSURE TO HIGH SOUND LEVELS

Podium Pro Audio PP1502A loudspeaker is capable of generating sound pressure levels (SPL) sufficient to cause permanent hearing damage to performers, production crew and audience members. Caution must be taken to avoid prolonged exposure to SPL levels in excess of 90dB. For example: Always place the speakers in such a manner that no audience members or personnel are continuously exposed to sound levels in excess of 90dB.

CONNECTIONS AND CONTROLS

Figure 1

① **POWER** LED lights green when the speaker is connected to AC power and **POWER**® is ON.
② **MASTER** This control adjusts the loudness of this speaker. It has no effect on **LINK**®.
③ **TREBLE** This control adjusts ±12dB at 12kHz. It has no effect on **LINK**®.
④ **MIDRANGE** This control varies ±12dB centered at 3kHz. It has no effect on **LINK**®.
⑤ **BASS** This control adjusts ±12dB at 80Hz. It has no effect on **LINK**®.
⑥ **MIC/LINE 1** This control adjusts the level of the microphone connected to **MIC**②. Or, adjusts the level of the source connected to **LINE 1**®. When a microphone is connected to **MIC**② and a source is connected to **LINE 1**®, it adjusts the *relative* level of **MIC**② and **LINE 1**®. The **MIC/LINE1** control is independent of the **MASTER**® control.
⑦ **MIC IN** This input will accept either XLR or ¼” PHONE plug, balanced or unbalanced.
⑧ **LINE 1** This input accepts balanced or unbalanced XLR connection.
⑨ **LINE 2** This input is intended for connection directly from a mixing console. **MASTER**®, **TREBLE**®, **MIDRANGE**® and **BASS**® controls are bypassed. Accepts balanced or unbalanced XLR connection.
⑩ **LINK** Use this output to link multiple speakers to a single source. **LINK** is the sum of **MIC IN**②, **LINE 1**® and **LINE 2**®, **MASTER**®, **TREBLE**®, **MIDRANGE**® and **BASS**® controls have no effect on **LINK**.
⑪ **POWER** ON/OFF Switch.
⑫ **AC 110V 50/60Hz** IEC power cord connector and AC fuse. The fuse and a spare are located under the cover directly above the AC plug.

INSTALLATION

Podium Pro Audio speakers are intended for portable applications where the speakers will be placed directly on the stage floor or mounted on a suitable speaker stand.

VERY IMPORTANT: This product is ***NOT*** intended for permanent installations. Such installations must follow rigorous standards, including cable or chain rigging for safety. No rigging anchor points are provided and any attempt to modify the enclosure for this purpose will weaken the structure. Therefore, any overhead placement requiring rigging cannot be considered safe.

FLOOR PLACEMENT: Speakers should be placed in a secure, dry and level location. Be sure to cover or tape down any cabling that crosses a traffic lane. Two speakers can be safely stacked. The feet of the top speaker will engage cups designed into the top of the bottom speaker. Do not attempt to stack the PP1502A more than two high. More than two speakers create a tipping hazard.

Try to place the speakers between the microphone(s) and the audience. This will minimize acoustic feedback.

STAGE “FOLDBACK” MONITOR: Place the PP1502A on its side, along the front edge of the stage aimed toward the performers. Exact placement is strongly influenced by type and placement of the microphone(s).

STAND MOUNTING: Podium Pro Audio speakers are compatible with standard 1-½” (38mm) stands.

Tip: Sound quality and coverage area are best when the tweeter is between 2 to 4 feet above the audience ear level.

- Speaker stands must only be used on smooth level surfaces.
- Be certain you select a stand rated for *at least 60lb.* Contact your dealer for recommendations.
- **NEVER MOUNT MORE THAN ONE SPEAKER ON A STAND.**
- Do not attempt to mount the speaker on a stand without an assistant.
  1. Mount the speaker on its stand *prior* to making any electrical connections.
  2. Check that the set screw in the speaker base is backed out enough to clear the stand post.
  3. After placement, verify that the stand post is fully seated in the speaker base.
  4. Tighten the set screw (by hand) to lock the speaker in place. Failure to do so may result in injury or equipment damage.
- Route and secure all cabling such that there are no tripping hazards. Use gaffer’s tape or other retaining system liberally.
- Any cabling which crosses a traffic lane *must* be covered or taped down.
- Add weight (i.e. sandbags) to the base of the stand for added stability. In a windy outdoor location this is vitally important!

AC POWER DISTRIBUTION

It is very important to provide adequate AC power to each speaker in the system. Performance of the PP1502A may be degraded if the AC voltage drops more than five volts. The length of the run and the number of speakers connected dictate the appropriate gauge AC cord (extension cord) to use. Use the following table to establish the correct gauge AC cord to use.

CAUTION *Never* connect more than three PP1502A speakers to a single AC cord run. If more than three speakers are used add additional AC cords *in parallel* as needed.

Cord Gauge	ONE PP1502A	TWO PP1502A	THREE PP1502A
16	up to 100’	up to 60’	up to 30’
14	up to 175’	up to 100’	up to 60’
12	up to 300’	up to 150’	up to 100’

SIGNAL DISTRIBUTION

Podium Pro Audio speakers can accept either *balanced* or *unbalanced* line level sources and/or microphones.

- A balanced interconnect is a three conductor system. Two inner wires carry the audio signal differentially (opposite phase) and the third wire is for ground reference and shielding only.
- An unbalanced interconnect is a two wire system wherein the center conductor (aka “HOT”) carries the signal and the shield/ground conductor is *also* a signal conductor.

The PP1502A will accept the two common interconnects. XLR and ¼” PHONE. XLR are balanced. ¼” PHONE cables can be balanced or unbalanced. Balanced interconnects provide superior noise immunity, especially for runs over 10 feet. It is recommended that you use balanced interconnects whenever possible.

LINKING MULTIPLE SPEAKERS

See **Figure 1** *for control and connection locations.*

In most cases it is best to link multiple speakers in a manner that results in *exactly* the same output from all linked speakers. This is achieved by using the **LINE 2**® input of the first speaker. Connect an XLR interconnect from **LINK**® of the first speaker to **LINE 2**® of the second speaker. You may link as many speakers as needed in this way and they will all output exactly the same signal. This is because **LINE 2**® is a direct feed to the power amplifier without any level or tone controls. If you wish to link two or more speakers and retain tone and level controls for each one, connect the source and **LINK**® interconnects to the **LINE 1**® inputs.
The PP1502A employs a buffered, fully balanced LINE OUT circuit. Therefore there is no practical limit to the number of speakers that can be linked!
Tip: To use this feature effectively it is necessary to understand exactly what LINE OUT is. It is the sum of the MIC IN② and LINE IN. This includes their relative levels as set by the MIC/ LINE1② control.

Note that the MASTER GAIN®, TREBLE®, MIDRANGE® and BASS® controls *have no effect on* LINE OUT. This allows you to optimize each speaker as necessary without altering the other linked speakers.